



doi:10.1136/practneurol-2020-002889

THE GAME OF RISK!

The transition from mild cognitive impairment (MCI) to dementia can only be understood backwards; but it must be lived forwards. Group-wise risk factors are known—but for trials and prognostication, individual risk prediction is needed. Using plasma biomarkers, researchers created models using 573 patients with MCI. The model that combines tau phosphorylated at threonine 181 (P-tau181) and neurofilament light (but not Aβ42/Aβ40), had the best performance. The area under the curve = 0.88 for 4-year conversion to Alzheimer's was stronger than a basic model of age, sex, education and baseline cognition, and performed similarly to cerebrospinal fluid biomarkers.

Nat Aging (2020). <https://doi.org/10.1038/s43587-020-00003-5>.

sniffed at. Although the stimulant is known to act across a range of receptors, we previously did not know which receptor was responsible for the specific high-affinity behavioural actions of cocaine. Using cortical neuronal cultures, researchers identified that cocaine binds to the membrane-associated brain acid soluble protein-1 (BASP1). Knocking down BASP1 in the striatum inhibits [3H] cocaine binding to striatal synaptosomes. Depletion of BASP1 in the nucleus accumbens diminishes locomotor stimulation, acquisition and expression of locomotor sensitisation to cocaine. Sol Synder, lead researcher here at 81 years young may have made another ground-breaking discovery in psychopharmacology.

BioRxiv <https://doi.org/10.1101/2020.11.23.392787>

LET IT SNOW!

This new study of the pharmacology of cocaine is not to be

OH NO-CEBO!

A novel and interesting methodology was employed to identify that

the majority of statin side effects are driven by the nocebo effect. Sixty people who had previously abandoned statins because of intolerable side effects were recruited. They received four bottles containing atorvastatin at a dose of 20 mg, four bottles containing placebo and four empty bottles; each bottle was to be used for a 1-month period according to a random sequence. Patients used an app to report symptom intensity every day. Symptom scores ranged from 0 (no symptoms) to 100 (worst imaginable symptoms). Astonishingly, 90% of their symptoms occurred when taking placebo, and 24 people had to stop taking meds at some stage (31 times with placebo, 40 times with statins). It is a shame that we cannot safely run this study with antiseizure drugs. Or could we? N Engl J Med. 2020;383(22):2182–2184.

WAX AND WANE

If inserting a long diagnostic needle into the general lumbar region and hoping for spinal fluid makes you squeamish, why not look at more accessible fluids for their diagnostic value? Researchers investigated earwax (left and right) from 37 people on two occasions. They used the wax to compare wax-cortisol with serum cortisol levels. They also compared a painful and painless method of harvesting said wax. Wax yielded more cortisol than hair samples and was faster than venepuncture. Truly, one man's trash is another man's treasure.

Heliyon. 2020;6(11):e05124.

Competing interests None declared.

Provenance and peer review Commissioned; internally peer reviewed.

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Rhys Bevan Jones' art features in his app 'MoodHwb'. The figure shows heads which can be used as metaphors when discussing mood and mental states. JMIR Ment Health. 2018;5(1):e13.